

**AMENDMENTS TO THE CLAIMS**

We claim:

1. (Original) A process for preparing impact-modified polystyrene by anionic polymerization, which comprises
  - 1) preparing a rubber solution from diene monomers, or from diene monomers and styrene monomers, by anionic polymerization, using an organyllithium compound as initiator, and with concomitant use of a solvent,
  - 2) adding, to the resultant rubber solution, an organylaluminum compound, its amount being such that the aluminum/lithium molar ratio in the rubber solution is greater than 1 or, if the organylaluminum compound used comprises a dialkylaluminum phenolate, is greater than 0.5,
  - 3) adding styrene monomer to the resultant solution, and
  - 4) adding, to the resultant mixture, organyllithium compound, or organyllithium compound and organylaluminum compound, the amount being such that the aluminum/lithium molar ratio in the mixture is smaller than 1 or, if the organylaluminum compound used comprises a dialkylaluminum phenolate, is smaller than 0.5, and polymerizing the mixture anionically.
2. (Currently Amended) ~~A~~The process as claimed in claim 1, wherein, during the preparation of the rubber solution in stage 1), no concomitant use is made of compounds which have a retarding action on the anionic polymerization.
3. (Currently Amended) ~~A~~The process as claimed in claim 1 ~~or 2~~, wherein the diene monomer used comprises butadiene and the styrene monomer used comprises styrene.
4. (Currently Amended) ~~A~~The process as claimed in ~~any of claims~~claim 1 ~~to 3~~, wherein the rubber has been selected from polybutadiene and styrene-butadiene block polymers.

5. (Currently Amended) ~~A-The process as claimed in any of claims claim 1 to 4~~, wherein the styrene-butadiene block copolymer rubber comprises at least one butadiene block with a weight-average molar mass of from ~~50~~50,000 to ~~250~~250,000 g/mol.
6. (Currently Amended) ~~A-The process as claimed in any of claims claim 1 to 5~~, wherein the butadiene content of the rubber is from 70 to 100% by weight.
7. (Currently Amended) ~~A-The process as claimed in any of claims claim 1 to 6~~, wherein the solids content of the rubber solution obtained in stage 1) is from 20 to 40% by weight.
8. (Currently Amended) ~~A-The process as claimed in any of claims claim 1 to 7~~, wherein the solids content of the mixture obtained in stage 3) is from 5 to 25% by weight.
9. (Currently Amended) ~~A-The process as claimed in any of claims claim 1 to 8~~, wherein the aluminum/lithium molar ratio of the solution obtained in stage 2) is from 1.01 to 10 or, if the organylaluminum compound used comprises a dialkylaluminum phenolate, is from 0.51 to 10.
10. (Currently Amended) ~~A-The process as claimed in any of claims claim 1 to 9~~, wherein the aluminum/lithium molar ratio of the mixture obtained in stage 4) is from 0.5 to 0.99 or, if the organylaluminum compound used comprises a dialkylaluminum phenolate, is from 0.2 to 0.49.
11. (Currently Amended) ~~A-The process as claimed in any of claims claim 1 to 10~~, wherein further styrene monomer is added in stage 4) prior to or during the polymerization.
12. (New) The process as claimed in claim 2, wherein the diene monomer used comprises butadiene and the styrene monomer used comprises styrene.
13. (New) The process as claimed in claim 2, wherein the rubber has been selected from polybutadiene and styrene-butadiene block polymers.
14. (New) The process as claimed in claim 3, wherein the rubber has been selected from polybutadiene and styrene-butadiene block polymers.

15. (New) The process as claimed in claim 2, wherein the styrene-butadiene block copolymer rubber comprises at least one butadiene block with a weight-average molar mass of from 50,000 to 250,000 g/mol.
16. (New) The process as claimed in claim 3, wherein the styrene-butadiene block copolymer rubber comprises at least one butadiene block with a weight-average molar mass of from 50,000 to 250,000 g/mol.
17. (New) The process as claimed in claim 4, wherein the styrene-butadiene block copolymer rubber comprises at least one butadiene block with a weight-average molar mass of from 50,000 to 250,000 g/mol.
18. (New) The process as claimed in claim 2, wherein the butadiene content of the rubber is from 70 to 100% by weight.
19. (New) The process as claimed in claim 3, wherein the butadiene content of the rubber is from 70 to 100% by weight.
20. (New) The process as claimed in claim 4, wherein the butadiene content of the rubber is from 70 to 100% by weight.